CUMMINS INC.

EXECUTIVE ORDER U-R-002-0671 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
2018	JCEXL08.9AAN	8.9	Diesel	8000		
SPECIAL	FEATURES & EMISSION		TYPICAL EQUIPMENT	APPLICATION		
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Periodic Trap Oxidizer, Selective Catalytic Reduction – Urea, Ammonia Oxidation Catalyst			Crane, Loader, Tractor, Dozer, Pump, Compressor, and Generator Set			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION STANDARD		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER	CATEGORY		NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.01	0.19		0.00	0.004			

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

_ day of September 2017.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

Engine Model Summary Template

		U-12-00	2-0671	Alleymit ps 111		8/28/2017	-		
Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control PDevice Per SAE J1930
JCEXL08.9AAN	4807:FR95299	QSL8.9	380@2100	217	137	1200@1573	230	115	DDI,ECM,TC, CAC, EGR , DOC. DPF
JCEXL08.9AAN	4807:FR95300	QSL8.9	350@2100	206	130	1200@1500	230	115	DDI,ECM,TC, CAC, EGR , DOC. DPF
JCEXL08.9AAN	4807:FR95301	QSL8.9	333@2100	178	119	1050@1500	199	99	DDI,ECM,TC, CAC, EGR , DOC. DPF
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